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10/718,505	11/20/2003	Ronald D. McCallister	1826-310CIPRI	1245

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EXAMINER

CORRIELUS, JEAN B

ART UNIT	PAPER NUMBER
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2611

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/718,505	Applicant(s) MCCALLISTER ET AL.	
	Examiner Jean B. Corrielus	Art Unit 2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 January 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-11 and 13-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-11, 13-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 21-23 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 21, recites the delay is a **“fixed delay”**. However, the specification, as filed, does not provide proper support for such limitation as claimed. The same comment applies to claims 22 and 23.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

4. Claims 2-5, 8-11, 13-16, 18, 20-23 are rejected under 35 U.S.C. 102(a) as being anticipated by May et al.

As per claim 2, May teaches a transmitter circuit see page 2474, col. 1, line 4 comprising inherently a modulated signal generator for generating a first modulated signal **s (t)** (note that in order to generate the modulated signals (t) a generator has to be used) conveying to be communicated data having a first bandwidth and having a first

peak-to-average amplitude ratio see page 2474, col. 2, lines 2-8 and page 2475, col. 1, lines 36-38; generating a constrained bandwidth error signal $K(t)$ in response to said first modulated signal $s(t)$ (note that in order to generate the error signal $K(t)$, a constrained envelope generator has to be used, hence such an element is inherent in May et al) see page 2475, col. 2, line 1; combining said error signal $K(t)$ with the modulated signal $s(t)$ see page 2475, col. 2, last three equations (note that in order to combine the signal a combining circuit has to be used, hence a combining circuit is inherent in May) to produce a second modulated signal conveying said to be communicated data having said first BW and said first PAR see page 2475, col. 1 section B- page 2476, col. 1, first full paragraph. In addition, as noted in the inventor submission filed on 7/5/05, a delay coupled between said modulated signal generator and said combining circuit to delay said first modulated signal into synchronism with said constrained bandwidth error signal, is inherent. The inventor further notes (in a submission under 37 C.F.R. 1.56, dated 8/28/06 in sister application S/N 10/718,507, copy of which is attached,) that the May reference teaches the linerarizer limitation.

As per claim 3, May teaches that the error signal exhibits a BW equal to or less than said first BW see for instance fig. 3 and page 2476 bottom of col. 2.

As per claim 4, peaking unit intervals inherently occur when said first modulation signal exhibits magnitudes greater than a threshold; said constrained bandwidth error signal includes error burst for said peaking unit intervals, wherein each error burst spreads energy over a plurality of unit intervals and exhibits a peak in one unit interval said delay element inherently delays said first modulated signal so that error burst peaks substantially temporally coincide with said peaking unit intervals. See fig. 2.

As per claim 5, said error burst peaks exhibit amplitudes which are responsive to amounts by which magnitudes of said first modulated signal exceeds said threshold

As per claim 8, note that in order to generate the error signal $K(t)$, a pulse generator has to be used. Hence, a pulse generator is inherently provided by May note the error signal is filtered using a filter see page 2475, col. 1, section B, lines 13-15.

As per claim 9, a pulse is generated when the modulated signal exhibits a magnitude greater than a threshold see fig. 2.

As per claim 10 said pulse exhibits an amplitude which is responsive to a value by which said first modulated signal exhibits said magnitude greater than said threshold see fig. 2 and page 2475, col. 2, last three equations.

As per claim 11, see claim 2.

As per claim 13, see claim 3.

As per claim 14, see claim 2.

As per claim 15, see claim 4.

As per claim 16, see claim 5.

As per claim 18, see claim 2.

As per claim 20, see claim 4.

As per claim 21, applicant submission filed on July 6, 2005 stated that the delay in May et al is half the pulse shape duration (i.e. fixed).

As per claim 22, see claim 21.

As per claim 23, see claim 21.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 6, 7, 17 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over May et al in view of Hedberg et al US patent No. 6,266,320.

May teaches a transmitter circuit see page 2474, col. 1, line 4 comprising inherently a modulated signal generator for generating a first modulated signal $s(t)$ (note that in order to generate the modulated signals (t) a generator has to be used) conveying to be communicated data having a first bandwidth and having a first peak-to-average amplitude ratio see page 2474, col. 2, lines 2-8 and page 2475, col. 1, lines 36-38; generating a constrained bandwidth error signal $K(t)$ in response to said first modulated signal $s(t)$ (note that in order to generate the error signal $K(t)$, a constrained envelope generator has to be used, hence such an element is inherent in May et al) see page 2475, col. 2, line 1; combining said error signal $K(t)$ with the modulated signal $s(t)$ see page 2475, col. 2, last three equations (note that in order to combine the signal a combining circuit has to be used, hence a combining circuit is inherent in May) to produce a second modulated signal conveying said to be communicated data having said first BW and said first PAR see page 2475, col. 1 section B- page 2476, col. 1, first full paragraph. In addition, as noted in the inventor submission filed on 7/5/05, a delay coupled between said modulated signal generator and said combining circuit to delay said first modulated signal into synchronism with said constrained bandwidth error signal, is inherent. Furthermore, at a page 2474 col. 2, section A-page 2475, line 1 May

teaches transmitting the signals simultaneously using a plurality of codes. It does not explicitly teach that a CDMA modulator is used. However, as evidenced by Hedberg et al, it is well known in the art to use a CDMA modulator to generate a plurality of code channels see fig. 2, for instance. Given that fact, it would have been obvious to one skilled in the art to implement the generator as a CDMA modulator as taught by Hedberg et al so as to be compatible with system(s) that uses CDMA technology.

As per claim 7, note that Hedberg teaches that the modulator includes a Nyquist pulse shaping (spreading) filter 120a. Given that fact, it would have been obvious to one skilled in the art to incorporate such a teaching in May et al and the motivation to do so would have been the same as provided with respect to claim 6.

As per claim 17, see claim 6.

As per claim 19, see claim 6.

Claim Objections

8. Claims 3 and 9 are objected to because of the following informalities: claim 3, line 2, "envelope" is mistyped as "envelop&". Claim 9 should be terminated by a ".". Appropriate correction is required.

5. The affidavit, filed by Paul Bernoff, under 37 CFR 1.132 filed 6/11/07, is insufficient to overcome the rejection of claims 2-11 and 13-23 based upon the May Reference as set forth in the last Office action because: there is no showing that the objective evidence of nonobviousness is commensurate in scope with the claims. See MPEP § 716. It is not clear from the affidavit what ground of rejection is being traversed and the reason(s) for the traversal since the affidavit did not make reference to any of

the claims rejected on the ground or a particular limitation(s) . Therefore, it is determined by the examiner that there is no “nexus” between the merits of the claimed invention and the evidence of secondary considerations.

6. In view of the foregoing, when all of the evidence is considered, the totality of the rebuttal evidence of nonobviousness fails to outweigh the evidence of obviousness.

Response to Arguments

9. Applicant's arguments filed 1/18/08 have been fully considered but they are not persuasive. Applicant argues that col. 11, lines 46-54 provides support for the limitation “fixed delay” as recited in claim 21-23. However, a review of such section of the specification does not show such a support for the claimed subject matter. Col. 11, lines 46-54 of the specification merely teaches that delay element produces delayed modulated signal which is sufficiently delayed to compensate for propagation and other delays encountered in off-time constrained-envelope generator 106 and pulse spreading filter 134. There is no disclosure however that delay 138 is a “fixed delay”. Applicant further argues that the inventor is not the better expert in the field of his invention. However, applicant fails to provide any evidence to that effect. It is the examiner position that the inventor’s work related to the current invention is an irrefutable proof that he is the better expert in the subject matter related to the field of his invention. Applicant further argues that the rejection relying on the inventor’s submission should be withdrawn because the inventor is bias and not credible. However, examiner notes that withdrawing a rejection based on the applicant’s perception of the inventor is not a sufficient reason to remove a rejection . in addition, in assessing the probative value of the inventor's argument, the opposing evidence

presented by applicant(in the form of affidavits and arguments), the interest of the inventor in the outcome of the case and the presence of factual evidence supporting the inventor's position (the May et al reference) were considered by the examiner. And after reviewing the inventor's comment in view of the May's teaching it is the examiner's position that a delay in a May reference has to be present. Applicant alleges that "Nothing in Applicant's argument suggests that one of ordinary skill in the art would understand that a non-fixed delay is used in May". However, it is noted that page 6 of the affidavit by Mr. Birch, filed 6/11/07, lines 1-2, suggests that a **non-fixed delay** is used in May et al's reference. It is the applicant's position that "implementing a fixed delay would be easily done without undue experimentation is equally unfounded". Examiner disagrees. Page 2475 of May col. 2, section III, May teaches a correction signal $c(t)$ is generated by adding a correction function to the modulated signal $s(t)$. Note that since the modulated signal $s(t)$ is available before the correcting function $k(t)$, the modulated signal $s(t)$ has to be delayed by a fixed amount in order to compensate for the processing delay associated with the calculation of the correcting function $k(t)$. Therefore, a fixed delay in May is inherently provided. Hence, once skill in the art would have been able to implement such an **inherent delay** without undue experimentation.

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jean B. Corrielus whose telephone number is 571-272-3020. The examiner can normally be reached on Monday-Thursday from 9:30-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chieh Fan can be reached on 571-272-3042. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jean B Corrielus/

Primary Examiner, Art Unit 2611